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CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING, WITH HINTS TO BEGINNERS, BY C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 5.—HIVES.

There is no royal road to success in bee-keeping any more than there is in any other industry; and as the time and attention given to bee-management must of necessity vary, it is only natural to expect that while some are successful others for want of success will give up bee-keeping in disgust. It is not always, however, the fault of the bee-keeper that success does not attend his efforts. He may have commenced with a style of hive that demands more time and attention to work successfully than he is in a position to give. Now, in endeavoring to give directions for managing the apiary properly there is one blot I must first notice. That the most improved system of bee-keeping should be extended to its fullest limits no one will deny to be an object worthy of every effort; but to the one bee-keeper who can manage the movable-comb system properly, there are, as far as my experience goes, at least ten who cannot, or at any rate do not. It is this latter class for whom I must write.

The fix-comb principle is objected to simply because the combs cannot be moved about at the wish of the bee-keeper. If, however, a hive is adopted with fix combs, but in which foundation can be used, that system will not be far behind the movable-comb system in point of honey returns, and it will be simplicity itself as far as management is concerned.

Years ago a hive, certainly in advance of the skep, termed the "Stewarton," and afterwards the "Carr-Stewarton," came much into favor among those bee-keepers who had not the time necessary to devote to bee-keeping on the movable-comb principle. Since the latter hive was introduced little or no effort has been made to bridge the gulf between the skep and the movable-comb systems, until the writer designed the hive now to be described.

This hive is known as the "Ivo" bar hive, and in appearance is very similar to the movable-comb or frame hive. The brood-chamber is simply four walls of substantial material, the front and back walls being rabbetted to receive the ends of the bars, which are $\frac{3}{4}$ inch thick and one and nine-tenths inch wide at the ends, while out of each side a piece $\frac{3}{4}$ inch wide and 9 inches long is cut in order that when the ends are close together there will be a space of $\frac{1}{4}$ inch between the

combs. The width of the hive is such as will allow of 9 of these bars being placed close together side by side.

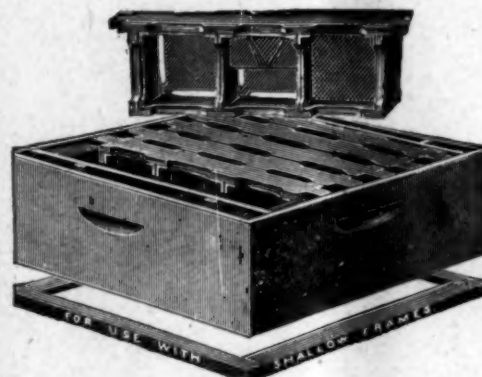
The supers are in all respects except depth like the brood-chamber, for while the latter is $7\frac{1}{2}$ inches deep the supers are only $4\frac{1}{2}$ inches in depth. This shallow depth is allowed for two reasons: First, because bees take much more readily to a shallow than to a deep super, and secondly because it may be used with slight alteration as a section-crate. The super is ordinarily fitted with wide bars about 2 inches in width, so that 7 bars occupy the space that accommodates 9 narrow bars.

If a start is to be made with a hive of this description, at least $1\frac{1}{2}$ pounds of brood foundation should be procured. The sheets of foundation are $7\frac{1}{2}$ inches in depth, and they should be cut so that one piece is $4\frac{1}{2}$ and the other $3\frac{1}{2}$ in depth. The top corners must next be cut off, also a small triangular piece out of the center of the top. Then open the saw-cut in the center of the bar with a small screw-driver and put in the sheet of foundation. The $4\frac{1}{2}$ sheets must be put into the narrow bars for the brood-chamber, and the $3\frac{1}{2}$ into the wide bars for the super.

When the bars are thus prepared and placed in position the hive is ready for the swarm. No swarm of less weight than 4 pounds should be expected to do much good the first season; therefore, a 4 or 5 pound swarm should always be secured whenever possible, the extra cost being trifling when the increase amount of surplus over what may be obtained from one of less weight is considered.

MOVABLE-COMB HIVES.

A movable-comb hive is the only shape that a bee-keeper who goes into the work of the apiary thoroughly can tolerate. By using such hives he has the bees and all parts of the hive



Super for Hive.

under complete control; but it is useless attempting this system unless with a determination to make it a success.

Accuracy in all its parts is essential in this hive if the bees are not to make movable parts immovable. A space of $\frac{1}{4}$ inch bees respect, but if any larger space is given (for instance between the two chambers when supering, or between the frame ends and the hive sides) it is almost certain that the bees will fill it with comb.

Those who construct their own hives will find the following instructions, if carefully kept to, all that is necessary in

making a good tiering hive of the style used most generally in England, and in America where bee-keeping on a large scale is carried on.

The hive consists of floor-board, brood-chamber, supers, lift and roof. The floor-board, with a slanting board in front, must be made to fit the brood-chamber, whose width will be determined by the thickness of the wood. The brood-chamber should be made of $\frac{3}{4}$ -inch wood, the outer walls $8\frac{1}{2}$ inches deep, and the inner front and back wall $8\frac{1}{2}$ inches. The inner dimensions are as follows: Side to side 15 inches to take 10 frames, $14\frac{1}{2}$ between the inner front and back walls, and 17 inches between the outer front walls, so that the 17-inch top-bar of the frame may rest on the inner walls and just fit in between the outer walls. When the frames are in the hive they will be level with the tops of the outer walls.

The supers may either contain frames or sections; if the former, they should be exactly like the brood-chamber except being 3 inches shorter, because super frames should be $5\frac{1}{2}$ instead of $8\frac{1}{2}$ inches in depth.

A "lift" is simply four walls with outer dimensions the same as the brood-chamber, and around the bottom to keep it in position are what are termed plinths. These plinths are also placed around the frame supers and around the brood-chamber except in front. The "lift" is for use upon the brood-chamber so that the frames may be better covered with quilts, but as supers are given the "lift" is raised so that it is always at the top. Over the "lift" is placed the roof, which should at all times be waterproof, and have a half or three-quarter inch hole in the middle of front and back for ventilation, and as a means of egress for bees through a cone escape.

FRAMES.

The size of the frame used is a very important matter; and as the sale of colonies may be one means of making the apiary a source of profit, it is absolutely necessary that the frame adopted should be of the British standard size, and therefore interchangeable with any hive in the same apiary, or in any part of the country, built to accommodate standard frames. [Of course in America the Langstroth frame, outside measure $9\frac{1}{2} \times 17\frac{1}{2}$ inches, has practically become the standard.—EDITOR.] This frame in outward dimensions is 14 inches wide and $8\frac{1}{2}$ inches deep, but the top-bar, which is $\frac{3}{8}$ -inch thick, projects on each side $1\frac{1}{4}$ inches. The side-walls are $\frac{1}{2}$ inch, and the bottom-bar $\frac{1}{2}$ inch. The width of the frame is $\frac{1}{2}$ inch. If frames are made at home (which is not advisable), the outside dimensions and the thickness of the top-bar are imperative. This frame is intended to be used only in the brood-chamber where the production of bees is being carried on.

Shallow supers are at all times to be preferred to deep ones. As they are more readily entered by the bees, they are easier to handle when full, and shallow frames are more convenient than standard frames for extracting.

The shallow frame for extracting-supers is 3 inches shallower than the standard frame, and like it in every other respect.

SECTIONAL SUPERS.

Many people who eat honey prefer it in the comb, therefore it must be produced in a marketable form so as to be packed for transit. Big straw or wooden supers are altogether too bulky and too unsafe for traveling; consequently square or oblong boxes of thin wood have been devised to hold a certain weight of honey. These boxes are generally 2 pound and 1-pound sizes, but the latter are now almost universally used. The 1-pound section is imported, in the flat, from America, where suitable wood for its manufacture, soft and while, is grown. The section is grooved so that when bent at the grooves a square of $4\frac{1}{4}$ inches and $1\frac{1}{2}$ wide is obtained. The ends of the section are rabbetted so that when folded and tapt at the joint they become fairly rigid.

Before being used in crates or oblong boxes that hold 21, standing in 7 rows of 3 each, end to end, each section must have fitted in the center a piece or a full sheet of foundation. If only a piece called a "starter" is given, it should be fastened by heat or pressure to the middle of the top of the section to afford the bees a guide in building their comb, otherwise they might, and probably would, build it in any but what the bee-keeper considers the right way. The sections put in the crates without starters or foundation cannot be removed from the crate without much trouble and mess, as in liberating the section the comb is broken and the honey made to run.

After the sections have been properly prepared and placed in the crate, a thin piece of wood known as the "separator" is placed between the rows of sections. The bees are thus compelled to keep their work confined to the space afforded by the section, and they usually finish off each side with a

nice, even surface, so that they may be packed without fear of damage.

How to get well filled sections and plenty of them will be fully dealt with under the heading of "Supering," and therefore it will be only necessary to say here that every hive should have supering capacity for 75 to 100 pounds of honey. If the hive is being worked for extracted honey, there certainly should be a brood chamber of standard frames, and three shallow-frame supers to form a complete and satisfactory outfit.

A hive worked for sectional honey will require different super arrangements. There should be in addition to the brood-chamber two lifts 9 inches depth, or one of 11 inches and another of 6 inches. The lifts will be taken off the hive when the section crate is about to be placed upon the frames so that any openings around the crate, through which heat from the brood-chamber might escape, may be stopped with pieces of rag. The lift—only one will be required at first—is then placed again in position, the quilts are put upon the crate and packed around in the space between the crate and the sides of the lift so that when once the bees begin to work in the super they may not be driven down by cold nights lowering the temperature in this chamber. Each super crate should have a square of glass fitted in one end: the progress of the work can then be noticed without disturbing the colony. This is of great advantage, inasmuch as additional supers may be given at the right time which may not only be the means of preventing the issue of a swarm, but of the bee-keeper adding very considerably to the surplus from that hive, which would have been lost to him but for the additional room given. Bees invariably build combs from the brood-frames to the bottoms of the sections in the crate simply because there is a space of $\frac{1}{8}$ inch between the top-bars, and an additional $\frac{1}{8}$ inch beneath the sections, the rule of not giving a space of more than a $\frac{1}{4}$ inch is thus violated with the result that crates are moved with difficulty, and many sections spoil. To obviate this nuisance, either an adapting-board must be used as a stand for the crate, or the frames must be made wider so that while the combs will be $1\frac{1}{2}$ inches barely from center to center, the frames will be only $\frac{1}{4}$ inch apart. All my hives in the future will be fitted with standard-sized frames made $1\frac{1}{5}$ inches wide instead of $\frac{3}{4}$. To keep the frames steady and at the correct distance apart, bell-staples will be driven into the shoulder, and a third down alternate ends of the frame.

[Continued next week]



No. 1.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

Twelve years ago the writer began at "A" in the above subject, and, while his advancement has been more or less rapid, he has not yet reached "Z" by a long shot.

It is undoubtedly true that the solution of the question of marketing honey, is for every bee-keeper who can to supply families within easy reach of his home. In this way vast amounts of honey can be kept from the city markets, and from overloading them. This matter of glutting the great centers of business with any produce is now well understood to be the cause of ruinous reduction in price, and not only of the particular lots of honey that happen to be sent to them, but in some degree reduces the price of all the honey in the land when offered for sale. Therefore, it should be strongly urged upon every producer of honey, to sell his product as near home as possible in actual miles.

There will be seen to be several cogent reasons for this, apart from the reason that heads this article. One reason for selling your honey near home is that strangers feel more confidence in you if you can say to them, "My county joins yours," or "Come over any day and I will give you a good time;" or any of the many friendly expressions that rise to the lips when meeting a fellow citizen of the same State, even tho 50 miles may separate your respective homes.

But you say, "I can't sell honey," "I am not built that way," "I haven't the gift of gab," etc. Now, with all respect to your opinion of your inability to sell honey, or to learn to sell honey, let me suggest that the main trouble with 75 per cent. of you is that you want to pronounce vwxyz the first day at school, forgetting that you started a-b, ab not many years ago. Of course, I mean by that you must learn to sell honey, and be satisfied with small profits at first, and small day's sales. Rome was not built in a day, neither can any man learn in one year all there is to learn about approaching the great public and finding the way to their pockets.

As we have decided to sell honey to our neighbors and

friends within 50 miles of the home apiary, let us not forget to start right. First, decide upon your package for your family trade, for I am proceeding on the supposition that catering to private families means the most in permanent results to the producers of honey.

By all means, adopt a size of package that sells for \$1.00, \$1.50, or \$2.00, and, if possible, have only one size of package, for that will greatly reduce your work and simplify your delivering. If any one desires more than your package, sell them two; and any person short of money, or for any reason wanting less, sell them half of your standard package, and this will be within reach of every one.

Be sure you know the exact net weight in pounds and ounces; also the capacity in pints and quarts, and when ask the weight or size answer freely, with no attempt to conceal or deceive. I want to bear down heavy on this point. Be absolutely open with your customers, for it is the best policy, and leads to the most lasting success—in fact, any other course leads to certain failure.

It seems to be a fact that the majority of men in trade in our great centers of business are not entirely candid with their trade. This causes an earnest seeking on the part of the customers for those whose word can be absolutely relied upon always, in quantity, quality and price; whose goods are always "all wool and a yard wide."

I feel sure that one of the greatest causes of the almost wholesale failures in business has been business dishonesty. There is no use trying to dodge the issue—it is dishonest to have on your shelves for sale to your customers, "pure black pepper," when you know, in fact were told by the drummer who sold it to you, that "it is half ground cocoanut-shells, so as to make the price more reasonable, and meet competition." In practice you will readily see the application—avoid even the appearance of evil.

There never was a time when dishonesty was more condemned than now, and fair dealing better or more liberally rewarded.

(Continued next week.)



Divider and Wedges in Honey-Production.

BY G. M. DOOLITTLE.

On page 401, I see Mr. Pettit has put a "coat" on that was not intended for him at all, and I am not even going to throw at him the old adage, "If the coat fits let him wear it," for when I wrote what I did on page 321, I did not have Mr. Pettit or his system in mind at all, for there are still scores of people who keep bees, some of whom live within 10 miles of me, who will believe nothing else, except that every bee which comes in from the field deposits her load of nectar directly into the cells, and unless forced in some way to go into the surplus apartment, they will deposit their loads in the brood-chamber. Therefore, Mr. Pettit will see that he failed to use the "charity which covereth a multitude of sins," when he said, regarding a sentence in my former article, "That assertion is based upon nothing at all."

No, Mr. P., that article was not intended for you at all; but since you call my attention to the matter I have something to tell you and the readers of the American Bee Journal, which I will try to make so plain that you will not call it even theory.

I took your case right out to the bees to decide. During the winter of 1896 I used my machinery in getting out some wedges according to your description of them, for the large entrance you were recommending at that time struck me very favorably. During 1897 there seemed no need, for them, so they were allowed to remain stored away. But this season we have had extreme heat during the past three weeks, so the wedges were brought into effective use, under 25 hives.

Now I wish to say that you are just right in saying that where the bees hung out the day before the wedges were put under, after they were under they did not so hang out, even tho the next day was warmer than the first. But when taking the matter to the bees for settlement, and lying down right in front of the hives thus fixt, so I could ask them all about it, they thank me for raising their hive up from the bottom-board, for said they, "It is much more pleasant to cluster in the shade than out in the sun, as we had to do before you raised our hive."

Yes, I found about the same amount of bees hanging below the frames that there was clustered out on the hive the day before it was raised; and while thus looking at them and talking with them about Mr. Pettit's system, those from the field kept coming in right over my head. So I watch to see them pass up at the "sides and rear end of the hive," as all

good bees should do when this system is used, but four-fifths of them did nothing of the kind. Just what they did do was to fly and alight right on the cluster hanging below the frames, or drop short of this cluster, when they would run till they reacht it, then climb up and into it, while only the few that happened to come close to the sides of the hive would run along there till they reacht the cluster. In no case did a single bee reach the "rear end" of the hive, for she could not do this except to crowd her way through 16 to 18 inches of clustered bees.

When we think of it, it seems very much more comfortable to the bees with these large entrances, but when we come to the practical part of the matter, it looks much as if we had the trouble and material for the wedges, for our thoughts and visions, with not a pound more honey.

The dividers I believe to be a good thing, that is, unless a few partly-filled sections, for "bait" sections the next year, are really of more value to us than to have all fully completed, as we are inclined to think is for "our best and highest good."

Onondaga Co., N. Y.



The Golden Method of Producing Comb Honey.

BY S. A. DEACON.

It goes without saying that altho an abundance of nectar-secreting flowers and strong colonies are the main requisites for securing a good honey harvest, unless these be supplemented by intelligent manipulation we can hardly expect to get the best results. And as we all know that (even as "trifles make the sum of human bliss") a few apparently very insignificant matters of detail in the management of colonies may favorably affect the "sum tottle" at the cessation of the flow, so we are not justified in lightly or contemptuously ignoring any suggestions calculated to work to the desired end which may, from time to time, be presented to our notice through the medium of these, or other bee-papers' columns; and the older and more experienced the proponent of any new suggestion, the more ready we should be to receive it with respect, and, analyzing it, endeavor to ascertain whether there may not perchance be something in it, or whether it be only fit to be past over with the laconic, and perhaps too frequently deserved comment—"only another fad!"

The foregoing rigmarole about represents the train of reflection that flitted through my cerebrum after reading (page 712, 1897) Mr. Hartzell's article on "Managing Swarms," in which he speaks very approvingly of the Golden method of producing comb honey, as set forth by Mr. Golden on pages 481 and 883 of 1896. I had read these articles cursorily at the time they appeared, but deeming the plan rather complex and fussy—incommensurately so with the probable extra gain—I past them out of mind; but Mr. Hartzell's commendatory statements thereanent have caused me to go carefully over them again, with the result that, I cannot for the life of me see wherein Mr. Golden adduces the least proof of his system of management having any particular pull over the method or methods hitherto commonly adopted of returning swarms. Either Mr. Golden's style is not sufficiently explicit, or the obtuseness of my intellect makes me inaccessible to the obvious; and so, like the woman mentioned by Dr. Brown, who preferred the old-time process of getting babies to any new-fangled plan, Mr. Golden will need to adduce far more perspicuous proof of the superiority of his method ere I, with my limited intelligence, can see my way to admitting a preference for it over the old style of doing things.

Neither he nor Mr. Hartzell, as far as I can see, make any comparison between swarms treated on the Golden plan and by any of the older or ordinary methods; they only contrast the results of the swarmed colonies treated by Mr. Golden's method with such as did not swarm. All they have seemingly attempted to prove, and of which every bee-keeper is well aware, is, that a swarmed colony, intelligently managed, can be made to produce more honey than a colony which has not swarmed; but nothing which either of these gentlemen have stated tends to prove that Mr. Golden's method of manipulation is superior to that generally in use under the same condition of things. Perhaps a further article from Mr. Golden's, or from Mr. Hartzell's, pen on this decidedly interesting matter may help to dispel the fog, and "make me sensible," as Paddy says, and enable me to see that there's more in it than I have so far been able to discover.

The way the matter presents itself to my sensorium is as follows: Mr. Golden claims that by hiving a swarm on his system, viz.: in a super of sections placed under the brood-chamber, he gets these sections rapidly filled with honey, and which would, he asserts, under the old order of management, "have gone into the brood-combs." Surely not, if the swarm

were hived on starters, and the supers put where their name plainly indicates they *should* be put—a-top, he would then have had the same results, or I am greatly mistaken.

I have never tried Mr. Golden's plan, for the reason that I feel thoroughly convinced that were I to do so the result *with me* would be about as much pollen in the sections as honey. How Mr. Golden manages to keep pollen out of his sections is "a huckleberry quite beyond my persimmon;" I am sure I could not do it, nor will I attempt to guess how he does it. I am sorry he is so reserved on this rather important point.

Mr. Golden's plan, we are seemingly told, can only be adopted provided a colony swarms. But why not treat *every* colony in the same way, swarm or no swarm? Allone would suppose to be necessary would be to cage the queen among the sections, as directed, and put the super underneath the brood body. But the pollen, Mr. Golden—pray what about the pollen? Will the bees go upstairs with that while leaving the honey down below?

Mr. Golden's statement that colonies manipulated by his method averaged 119 pounds as against 53 pounds obtained from those which *did not swarm*, furnishes no proof, that I can see, of the superiority of his system of returning and treating swarms over those long in vogue. I, for one, would esteem it a favor if Mr. Golden would kindly furnish us with comparisons between returned swarms managed by his method and a like number treated in the old way, setting forth clearly and serially each and every detail and operation, and not omitting to state how he overcomes the difficulty of the pollen; and if he succeeds in convincing me of the superiority of his plan I shall not hesitate to adopt it (if ever a honey-flow *should* by chance come my way—a thing I have not seen for the past four years!) and that with a feeling of gratitude towards its originator.

At the same time let me tell Mr. Golden right here that tho I may be induced upon clearer proof of its superiority than has been so far advanced to adopt his swarm-returning plan, I'll see him hang—I mean bothered, before I'll have any truck with that fussy old feeding arrangement of his; for I consider that my simple "Rapid Drawer Feeder" beats his all to fits—knocks it clean into a cockt hat! I hope he will try it and be convinced.

But as I am getting into "the sere and yellow"—verging on three score—and Mr. Golden's "pictor" doesn't show that he can give me any points in this respect, I think it is time we old boys gave our inventive faculties a rest, and let the youngsters run the "Advance" department of the Show; and who, I am afraid, will only be poking fun at us old fogies, and at what they will conceitedly call our "funny fads;" and, what with my chest of drawers in the basement, Mr. Golden's topsy-turvy ideas, so alarmingly subversive of the old order of things, they will be setting us down as getting doty. Well, it's a perplexing, bewildering, intellect-confusing pursuit, calculated to drive any one embarking in it crazy, and I am seriously thinking of leaving the bees to their own rude, primitive and senseless devices, and let 'em see how they get on, relinquishing all further attempts to reform them, and going on with that nap where Mr. Bevins' left off!

South Africa.



The Power of Association or Combination.

BY HON. EUGENE SECOR.

It ought not to be necessary, at this late date in the nineteenth century, to offer an extended argument to prove the power and value of organized effort.

There was a time in the history of mankind when the individual seemed to be a more potent factor in society and business than at present. There was a time when every man builded his own home and defended it by his own right arm. There was a time when every successful enterprise was projected and carried to completion by personal enterprise, personal valor, or personal wealth.

Even after tribal relations had been established and tribal protection guaranteed, success depended almost entirely on individual exertion. Cities were built, large mechanical transactions attempted, and cattle ranches established all without syndicates.

But the world is a little older than it was. Society has changed in some respects. Almost everything is done differently from what it used to be. Now, instead of every man being his own banker, and carrying his money in the sack when he goes down to Egypt to buy corn, he writes his check on New York or London. Business methods have so improved that a dollar goes farther in transacting the world's business than it did in the old time. This has been brought about

through organization and combination. A great many individual dollars brought together through associated effort may be made to produce effects which never could have been brought about by the same individuals acting each for himself and independently.

Organization has become the great fact of the age. No railroads are built by individual capital. No steamship lines are owned and controlled by one man. Great commercial enterprises are launched and sustained by combined capital and organized effort. Corporations have taken the place of the once single-handed manufacturer until it is hardly possible for one man, without capital, to compete with corporate wealth.

Since the business of the world is largely done by great corporations, the trade guilds have been a natural outgrowth, because the only way to meet organization is by counter organization. Men lay their heads together, form alliances for mutual protection, and thereby gain strength impossible to the single worker.

Men interested in a common purpose are enabled to unite on a common plan of action, and work to some effect. For instance, it is too large a job for one bee-keeper to attempt to fight adulteration of honey, but if he can combine his efforts with that of ten thousand other bee-keepers, all acting in unison, and that organization acting with other associations interested in the subject of pure food, together they may accomplish something.

As government in this country is constituted, the powers that be are ready to listen to any one who represents a considerable body of voters, if the said voters "mean business."

When a politician is asked to support a measure, he wants to know how many of his constituents are anxious about it.

All other trades and professions are organized for mutual help and protection. Bee-keepers should have one organization so strong in numbers and influence that their rights shall be respected. The object of the United States Bee-Keepers' Union is to fill this long-felt want. Its purpose is two-fold—to promote legislation helpful to bee-keepers, and to act as the guardian of their legal rights.—American Bee-Keeper.

Winnebago Co., Iowa.



Suggestions on Apiarian Exhibits at State Fairs.

BY W. Z. HUTCHINSON.

For at least a dozen years I have been making exhibitions of bees and honey at my own State Fairs, and this year (1897) I exhibited bees and honey at five State Fairs. It is from this experience that I wish to criticize some of the premium lists and to make some suggestions.

Perhaps I cannot begin better than by giving such a premium list as I would approve, and then proceeding to compare it with the lists of some of the State Fairs, and show why I would make the changes suggested:

| | 1st. 2nd. |
|---|-----------|
| Single-comb nucleus Italian bees..... | \$10 5 |
| Single-comb nucleus black bees..... | 10 5 |
| Single-comb nucleus Carniolan bees..... | 10 5 |
| Sweepstakes on bees, greatest number of different races of bees, in single-comb nuclei..... | 10 5 |
| Comb honey, most attractive display of 250 pounds, no more and no less..... | 25 15 |
| Sample case of comb honey, not less than 10 pounds, quality and manner of putting up for market considered..... | 5 3 |
| Extracted honey, most attractive display of 250 pounds, no more and no less..... | 20 10 |
| Specimen of extracted honey, not less than 10 pounds, quality and manner of putting up for market considered..... | 5 3 |
| Beeswax, most attractive display of 10 pounds, no more and no less, bright yellow wax to have preference..... | 10 5 |
| Largest and most attractive display of honey-producing plants, pressed and mounted..... | 15 8 |
| Largest and best display of apiarian implements..... | 15 8 |
| Sweepstakes, the largest, best, most interesting and instructive exhibit, all things considered..... | 25 10 |

The foregoing foots up \$242, and it could be adopted by any Fair association by simply changing the amounts of the premiums, keeping the proportions between the sums the same.

I will now proceed with my criticisms, keeping in mind the fact that the object of a Fair is to encourage, stimulate and educate.

Turning to the premium list of the New York State Fair, I find that premiums are offered on the same kinds of bees as are mentioned in the foregoing list, but, while it says "in observatory hives," it does not specify that they shall be "single-comb hives," and the premiums are not liberal.

When I first began exhibiting bees they were always

shown as full colonies, and "numerical strength" was made one of the competing points. A populous colony bears confinement very poorly—practically it is ruined by the confinement of a week or ten days. The bees are quite likely to smother, and the combs to melt down from the heat. Beside this, a full colony does not really show so much as can be seen in a single-comb nucleus. The brood and queen are always in the center of the colony where they are out of sight. How often at Fairs we hear the expression, "I would like to see a queen-bee! I have never seen one, and I would be obliged if you would point her out to me." With a single comb this can always be done, as the queen can be found upon one side or the other. The few bees bear confinement very well, especially if they are young bees and given abundant room. There is nothing about an apiarian exhibit that attracts attention quicker than bees under glass. People will exclaim, "Oh, see the bees!"—and then rush up, and then rush off after others to bring them up. Bees always draw a crowd, and this allows the exhibitor to explain to an interested audience the wonders of bee-keeping, and the healthfulness and value of honey as a food.

Taking bees to a Fair is risky, laborious and expensive; they are something that requires much care in handling and in looking after, and for this reason the premiums ought to be liberal. I do not approve of offering premiums upon all of the different varieties of bees, as there are some varieties that are of no great value in this country, and in regard to which there are many different opinions. The three varieties mentioned might be called the standard varieties, and are recognized as such. If exhibitors have other varieties and wish to exhibit them, the "sweepstakes" offer will cover such displays.

In one respect the New York premium list is ahead of any list I have seen. In both comb and extracted honey, it specifies the *quantity* of honey that shall be shown. I have only one criticism to make. It says "best display." I would say "the most attractive display." Perhaps this is hypercritical, but there cannot be too much attention given to the wording of the list—have it so worded that it is impossible to be misunderstood.

The matter of quantity ought to be explicitly mentioned. The Indiana list simply says, "Comb honey, quality and manner of putting up for market to be considered." Not one word about the quantity. Had it said the "most attractive display" that would have been better, as quantity might have been considered one factor in attractiveness. As it was, one exhibitor went to the trouble to build up a pyramid of honey that reached to the roof, assuming that, if the honey was all equally good so far as "quality and manner of putting up for market was considered," the largest quantity would carry off the palm. The judge decided solely upon "quality and manner of putting up for market," in both comb and extracted honey, quantity cutting no figure whatever.

Hitherto, most of the premium lists have offered premiums for "the best display" of comb honey. Lately some of them have changed it to read the "most attractive." These offers are pretty good, but the objection is that the first prize usually goes to the largest display. Of course, size is one attraction, but it is not the only one by any means. As it is, most of the exhibitors bring in their honey in the regular shipping-cases and stack it up, and the largest pile gets the first premium. There is not much encouragement to make the exhibit attractive in other ways, such as by arrangement or ornamentation. This is why I recommend most heartily the New York premium list in this respect. It limits the quantity to 250 pounds, it must be that much, no more and no less. Now then, the exhibitor who can put up that amount of honey in the most attractive shape will win the prize.

There is a premium offered on tasteful arrangement and skillful display rather than upon quantity; 250 pounds of honey is really enough, if properly displayed; when we have seen that much, it is no great sight to see twice as much. Comb honey is fragile stuff, and the caking around of large quantities of it, and paying freight upon it, when better ends can be gained by working on different lines, is unwise. As there is a greater risk and expense in shipping and exhibiting comb honey than is the case with extracted, the premiums should be greater on the comb honey. Aside from the premium on the most attractive display, there ought to be a premium on a small quantity, so small that it can be furnished by any bee-keeper, and the offer should be for the best honey, that is, for "quality and manner of putting up for market."

Referring again to the matter of bees, I see that some of the Fair associations still offer premiums upon queen-bees caged. There is no place in which a queen can be shown to so good an advantage as in a single-comb nucleus, and the only judgment that can be pronounced upon a queen is that

made by looking at her workers. I have reference to purity of race, and that is the only point that can be decided at a Fair. Queens kept in cages in the cool weather that frequently comes during the fall are often chilled and die.

At the Illinois State Fair last year there was a premium offered on caged queens, and one of the competing points was that of quantity. The nights were cool, and one exhibitor lost nearly 20 queens (worth twice the premium offered). Another had 28 queens on exhibition. He took great pains to keep them as warm as he could nights, but many of them were worthless at the end of the Fair. The first premium was only \$10, and the exhibitor who won it had on exhibition 35 queens, and lost probably half of them after the Fair was over. Queen-bees ought to have no place on a premium list. The place for them to be shown is in the single-comb nuclei, where they can be kept warm and cared for.

There is one other premium that ought never be offered, and that is for the greatest number of samples of different kinds of honey. This offer would be all right if all men were honest, but, unfortunately, they are not, and the "manufacture" of different samples by mixing is so easy and so difficult of detection that many cannot withstand the temptation. There ought to be *nothing* for which the judge must take the exhibitor's word. Some lists contain such provisos as the following: "Honey must be of the present year's crop," "Must be the product of the exhibitor," etc. Such things are foolish, as there is no way of proving that they are lived up to.

While I am discussing the things that ought to be left out of a list, I may mention the offering of a premium on "honey extracted on the grounds;" also "comb foundation made on the grounds." These offers came about in this way: The managers of Fairs have about discontinued the offer of premiums on all kinds of implements and machines. When bee-keepers could no longer get a premium on a honey-extractor, they induced the managers to offer one on "honey extracted on the grounds," thus bringing in the honey-extractor. But this is no premium on the extractor, as the honey shows no characteristic of the machine that is used. It has been urged that the use of the machine on the grounds educates the public. As a rule, not two dozen people will see this operation—often it is done toward night, when the crowd is off out of the way. It is a messy, disagreeable task when attempted away from the accessories of the honey-house.

The same objections apply to the manufacture of comb foundation on the grounds, with the exception that in this case the foundation *might* show the superiority of the machine in a slight degree, but it might also be a greater indication of the skill of the operator. I don't wonder that the managers have discontinued the offering of premiums on implements and machinery—that is, in the way of pitting one implement against another, as each implement is usually exhibited by the manufacturer or his agent, and the awarding of the premiums is very difficult, and the awards unsatisfactory. But there are premiums offered at many Fairs for the best display of furniture, clothing, musical merchandise, stoves, etc., and in this sense there might be a premium offered for the best display of apiarian implements that would bring no unpleasantness. The display of implements is of interest to bee-keepers, and aids them in giving information to the general public.

The display of honey-producing plants makes one of the most handsome backgrounds that can be used in connection with an apiarian exhibition, and interests and instructs the public.

A general sweepstake premium for the largest and best exhibition is a powerful incentive to the making of a large and attractive exhibition, and ought not to be omitted. Diplomas are "no good."

In all of the other departments of the different premium lists there is something approaching uniformity—that is, the horse department of the Michigan premium list does not differ materially from that department in the premium lists of other Fairs, and there is no reason why the same uniformity might not exist in the apiarian department of the different lists. I shall send a copy of this paper to the secretaries of the different Fairs, and to the premium-list committees when I can learn of them; also to those bee-keepers in each State who are interested and attend their State conventions. There is probably not a State Fair association that would not adopt the premium list recommended by their State association of bee-keepers. The managers have no interest in the matter except to please the bee-keepers; that is, if there is a given sum that can be used in the bee-keepers' department, the managers are perfectly willing that the bee-keepers shall make up their own list.—Country Gentleman.

Genesee Co., Mich.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

(Questions may be mailed to the Bee Journal, or to Dr. Miller direct.)

Using Two-Story Brood-Chambers.

You advise for comb honey two-story 8-frame dovetailed hives, or 16 frames, until the time to put on supers, then one story is to be taken off, reducing them to one story or eight frames. My experience is that in this locality the honey harvest opens and supers are to be put on somewhere near May 15; and up to that time the queen never occupies or fills more than eight frames with brood. In that case I should think it would not be necessary or practicable to put on the second story. Am I correct, or not?

INDIANA.

ANSWER.—I don't know. If a single story gives all the room the queen will occupy, and if no more room is needed, then there can hardly be any advantage in giving a second story. But you can hardly be very sure about this if you've never tried it. Are you sure none of your queens will occupy more than eight frames if they have a chance? I think you'll find it true that, as a rule, bees don't like to use either of the two outside combs for brood, using them only for honey and pollen. If you find brood in either of the outside combs (and you may find it in both) you may feel pretty sure that they are somewhat crowded for brood-room; and if you find eight combs occupied with brood in an 8-frame hive, the probability is that more than eight combs would be used if the bees had two stories. Keep a strong colony in one story of eight frames and it will have brood in not more than eight frames, if indeed it has more than six, whereas the same colony in two stories may have 9 to 14 frames with brood. Some colonies don't need the second story; some do. If you practice using two stories, you'll find a good many more of your colonies needing them than if you kept all of them constantly confined to one story. That is, by giving always all the room needed, you'll have stronger colonies.

A Quintet of Questions.

1. Do the bees store as much honey in the sections where only 21 are put on a hive as where there are 32?

2. Dr. Gallup told in this Journal of a man who made 108 colonies of bees out of one in two seasons. How did he get enough queens? and how did he get the colonies strong enough for winter?

3. How long should a good queen-cell be? Are natural queen-cells better than others?

4. Can you give me the address of a few bee-keepers that use the Quinby closed-end-frame hive, as shown in Benton's book on bee-keeping? Are they better for wintering than the loose-frame hives?

5. Do Doolittle and Gallup answer questions in the American Bee Journal?

WISCONSIN.

ANSWERS.—1. That depends somewhat upon how the matter is managed. If you put on one super at a time, and wait till all the sections are sealed before giving a second super, you'll probably get quite a little more honey by using the larger supers. If you use better management, and give room as fast as needed, never allowing the bees to be crowded for super room, you'll probably find no difference.

2. I don't know the particulars of the case, but he could follow the nucleus plan, rearing a queen in the nucleus, and then building up the nucleus. With a sufficiently long and good honey season, there would be no trouble in having the colonies stored for winter, the latest formed receiving aid from the earlier ones. Feeding might also be resorted to.

3. Perhaps something like $1\frac{1}{4}$ or $1\frac{3}{4}$ inches. But there are so many exceptions to the rule that it makes the rule of little account. Sometimes a cell two inches long will be a very poor affair, and sometimes a good queen will come out of a cell that hardly shows above the surface of the comb. So far as you can judge from appearances, the length of a cell is hardly so important as its appearance otherwise. A cell that is deeply pitted is more likely to be good than one that is smooth. That is true in the case of cells reared for natural swarming. If you take away the queen, and a cell is reared right in the middle of a comb with brood in every cell about it, the cell

may be perfectly smooth and of so little prominence as not to be noticed at a careless glance, and yet it may produce an excellent queen.

The average natural queen-cell is better than the average cell reared when the bees had no previous thought of swarming or superseding. For in making up the average, you must take into account a lot of very poor cells reared in weak and dispirited nuclei. Rightly managed, however, and reared in a strong colony—at least left in a strong colony till sealed—a cell reared artificially may be as good as the very best.

4. I'm not entirely sure of the address of a single bee-keeper who uses that frame, for altho many Quinby frames are used, I don't know which are closed-end. If any of the fraternity who use this particular kind of frame care to answer any questions that may be asked about them, perhaps they will make it known. As a rule, there is no other class of men more willing to divide their knowledge. Closed-end frames ought to be warmer for winter than others.

5. All the answers that appear in this particular department are written by the same person. When a question comes in, it goes into the general hopper, and is answered in this department. But both of the gentlemen named have answered many questions in this paper, and probably would do so at any time if so requested.

Honey in Mason Jars—Smothered Colony.

1. I have some extracted honey in Mason fruit jars. Would you advise one to put the covers on tight, the same as when canning fruit? About $\frac{1}{2}$ of it was unsealed when extracted. It is not for sale, but for my own use.

2. I was obliged to move a colony that was queenless, but had some sealed queen-cells. In the morning I stopt the entrance with wire-cloth before moving it, and at night on removing the cloth I found most of the bees smothered, and the two outside combs (heavy with honey) a little broken down, and some melted. The bees had turned almost black, and most of the brood was dead. What would you do with the combs having the dead brood?

For information, I would say that I found enough live bees to form a nucleus, and to sting (in fact, the sharpest and worst-feeling sting I ever received). I gave them some eggs from another colony in case the queen-cells did not hatch out, all in the same hive, and smoked them in after cleaning it out. I also extracted the two broken combs and have the honey in a jar by itself to find out how it acts.

OREGON.

ANSWERS.—1. If you heat the honey as in putting up fruit, then seal it up tight, it is said to keep well and not granulate. But it's rather a dangerous thing to heat honey, for if you run it above 160° you are likely to darken it and hurt the flavor. If you leave the covers loose or entirely off, so as to give chance for evaporation, and then keep it in an airy place, a place where salt will keep dry, you will find it will keep well, altho it may granulate.

2. I would give the combs of dead brood to other colonies to clean up and take care of. It's only fair to say that some good authorities say there is danger of foul brood from rotting brood. I agree with those who think that if there is no foul brood present in any other hive you can't start foul brood without the seeds of foul brood, but knowing the two views you can act on your own judgment. If you are afraid the decayed brood will start foul brood, by all means burn it up. But if it was in my own apiary, I would give it to a strong colony, or to more than one colony.

You will very likely find that the honey extracted is not different from other honey.

Bee-Range, Shading Hives, Etc.

Being a new subscriber, I am not aware that the question of bee-range has been discussed before. Now that nectar is none too plentiful, the question of how far bees will range in search of food, might be taken up with profit. Also, the most improved manner of shading hives, which may be termed a burning question.

ILLINOIS.

ANSWER.—At different times the question has been asked, "If I can have only one, shall I get a bee-paper or a bee-book?" I'm not sure but I have said a paper first, or at least have put them on equal footing. I wouldn't answer that way now. I'm older, and know more. By all means get the bee-book first. There are certain points that every bee-keeper—every beginner in bee-keeping—will need to know, and that he will be likely to want to ask about. These points are pretty well known to every experienced bee-keeper, and the text-

books take them up and answer them, in most cases more fully than they can be answered in a department like this. It is much better for the beginner to have all these questions answered in bulk in a book, available at any time, and more easily referred to than if scattered in the pages of a bee-paper, and after you've well mastered the contents of any or all of the best text-books, you will still find plenty of things to ask about.

The matter of the distance bees will go for stores has been very thoroughly discussed, and it would be space wasted to have much room taken up with its discussion; but that you may not have to wait till you get your bee-book, I'll say that there are some differences of opinion as to the distance bees will go to gather stores. Some think that bees will go from choice three miles or more. Some think they do not often go more than $1\frac{1}{2}$ or two miles. There are cases on record in which bees have been known to go seven miles under favorable circumstances. So you see there is some chance for difference of opinion, and while the matter has been fully discussed in the past, it is quite possible you may get some new light, and any facts that may come to your knowledge as helping to settle the question will be gladly welcomed. If you consult the actual practice of those who have out-apiaries, you will probably find that they are pretty well content to have their apiaries three or four miles apart, in which case they seem to think that bees do not work generally much more than two or three miles from their hives.

Looking at a text-book, I find that the question of shade and ventilation (it's hardly a "burning question," rather a cooling one), occupies as much as perhaps two pages like this. I may say in a nutshell that if you have trees for shade, you have the very best kind. If you have no trees, and must have shade without time to grow anything, one of the ways is to have any kind of a covering of boards with a space between the covering and the cover of the hive, and a big stone or something else by way of anchorage. An easy way, if tall grass is easily obtainable, is to put on top of a hive an armful of green-cut slough grass or other tall-growing grass, and lay upon it two or three sticks of fire-wood. It dries to its place nicely, and will last throughout the season.

Use of Acid in Rendering Wax.

1. What kind of acid is sometimes used in rendering wax, and what is the process?
2. Is wax rendered with acid just as good for foundation-making?
3. Can acid be used to any advantage on residue from rendering old combs in a sun extractor?
4. Can any more wax be obtained from such combs by the use of acid?

ARKANSAS.

ANSWERS.—1. Sulphuric acid is the kind used. I have no practical knowledge of the process, having never used acid in that way, but I believe the plan is to mix the acid with the wax while hot.

2. There seems to be a difference of opinion. Probably the wax does not have quite so much of its peculiar, agreeable odor after being subjected to the acid.

3. Yes, it is on that sort that it is used to the best advantage.

4. Yes, if I am not mistaken, you can get wax from remains that otherwise would be thrown away.

Keeping Down Increase.

If I do not desire any more increase of my apiary, and my bees are swarming, is it not a good way to prevent increase of colonies by returning the swarm to the old hive, provided I take all frames with sealed brood out of it, and divide this among weak colonies in the apiary, and give the new swarm empty combs or frames with full foundation? My idea is that I could leave the old queen with it, or if I do not want her, kill her, and leave one old comb with one or two sealed queen-cells in it. Of course, when I give the old combs with sealed brood to other colonies, I brush off all the bees to the old stand. What do you think about it?

LOUISIANA.

ANSWER.—Your plan will work all right. Leave the old queen with the colony, and you have the same as any natural swarm, with the added advantage that it is considerably stronger than when managed the usual way. You will hardly be so well satisfied with leaving them a comb with queen-cells. If you leave more than one cell they may trouble you with swarming. If you leave only one, that one may not be the very best one, and there is more possibility of its entire failure

than where the bees have several to choose from. Moreover, if there is only a queen-cell left, it will be, perhaps, two or three weeks longer before young workers will be emerging, than if you had left the old queen. Your colony will be badly depleted before recruits come on the field of action.

Uniting Colonies.

How would you unite two colonies without their fighting? I tried it and did not succeed very well, as they did a great deal of fighting.

PENNSYLVANIA.

ANSWER.—There isn't room in this department to give all that should be known and is given in the text-books. In general, it may be said that much depends upon the condition of the bees, pasturage, etc. If one of the colonies to be united has its queen removed a day or more before uniting, there will be less trouble. Bees unite more peaceably at a time when pasturage is plentiful. If you shake all the bees off the combs, letting them run into an empty hive thoroughly mixed up, and afterward give them their combs, there will be little trouble. If you alternate the frames, putting into an empty hive a comb from one of the hives with its adhering bees, then a comb with its bees from the other hive, thus alternating throughout, there will generally be no trouble. If the colonies are so small that one of them can be put in one side of a hive and the other in the other side, with an empty comb between, they will generally unite peaceably.



Bees and Horticulture.—G. Kimbrell planted muskmelons close to his bees, and also $\frac{1}{4}$ mile distant, surrounded by timber, where no bee was ever seen to visit them. They grew alike, bloomed alike, but the vines near the bees set four melons to every one on the other vines.—Busy Bee.

Removing Honey from Hives.—Don't use much smoke in this process, as honey often has a slight, smoky tinge from injudicious smoking, says C. P. Dadant, in Busy Bee. An escape is a good thing, either for comb or extracted honey, but if the weather is very hot the combs may break down for lack of free ventilation if an escape is used.

Space Between Two Surfaces of Sealed Honey is a matter of dispute between J. E. Crane and the editor of Gleanings. The latter says he measured a number of lots coming from different parts of the country, and nine out of ten of the spaces would measure $\frac{1}{4}$ -inch. Some went $1\frac{1}{64}$ under, some $1\frac{1}{16}$ over. Mr. Crane found the spaces varying from $3\frac{1}{16}$ to $\frac{1}{4}$, the average being somewhere from $20\frac{1}{96}$ to $21\frac{1}{96}$. Mr. Root thinks it may be that blacks make closer spacing, as Mr. Crane's honey was from blacks.

Specific Gravity of Different Honeys.—R. Wilkin had a glass tumbler $\frac{1}{4}$ full of white honey. He filled it with dark amber sun-extracted honey. In a few hours the white honey was on top. Then he filled the tumbler $\frac{1}{4}$ full of white honey, and put two tablespoonfuls of dark on top. The next morning the dark was in a distinct stratum at the bottom. He suggests having 12 pounds of honey specially colored, then a small quantity, by staying on top or sinking to the bottom, would show whether a lot of honey was above or below the 12-pound mark.—Gleanings.

Some Bee-Lore.—Editor Abbott quotes a paragraph from the Youth's Instructor, but some remarks he makes rather imply that he does not fully endorse it. The paragraph is as follows:

"After a time the grubs shut in the big cells turn into queen-bees, and they begin to sing a song. The queen-bee hears it, and she knows that more queen-bees will come out. That makes her angry. She runs at the cells to try to kill the new queens. The workers prevent her. But there can be only one queen in a hive at a time. So the old queen says, 'Come! I will go away!' Many of the old bees say, 'We will go with our queen.' Then with her they seek a new home."



GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—\$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Langstroth Monument Fund is again brought up in Gleanings for July 15. It seems very strange that all the bee-keepers in America are unable to get together even \$200 for the purchase of a monument for Father Langstroth. Only about \$100 is now in sight for the purpose. We were hoping that by next fall the monument might be bought and erected.

Mr. P. H. Elwood, one of New York's greatest bee-keepers, says that he has just been buying a family monument for \$100, and thinks it good enough. Editor E. R. Root says that his idea is about a \$200 one for Langstroth. Well, suppose we all call it \$200, then, and go to work now in good earnest and raise the balance of about \$100 during the month of August. It can be done in one month just as well as in two years if bee-keepers will only think so.

Why not have four or five hundred 25 or 50 cent subscriptions right away? Send them in to us, if you prefer, and we will publish the list of names of contributors, and forward the money to the proper place.

Rough on Chicago Honey.—Mr. Stephen J. Harmelling, of South Dakota, recently had an article in the Northwestern Agriculturist, on "South Dakota as a Bee-Country," in which we find this paragraph:

"The home market for honey is good. There is no trouble in getting 12 to 15 cents for extracted. The flavor of Dakota honey is superior. That of wild mustard is delicious. Chicago has sent too much 'Rose Honey' and 'Bumble-Bee Honey' into these markets. Chicago is really the meanest hole of a city on the face of the earth. We expect all that comes from Chicago to be adulterated. It is so notorious here that people who have ever tasted real honey can notice something wrong,

and now they suspect everything that comes from the East, and will pay a good price for the home product, which they know to be pure."

We have shipped honey into South Dakota, and never sent any that was impure. There is plenty of pure honey in Chicago, or else the bee-keepers themselves are rank adulterators. And that we don't believe. The idea of any one saying that South Dakota people "expect all that comes from Chicago to be adulterated!" We don't swallow that at all. Any one with just ordinary sense ought to know that there is plenty of pure honey sent to Chicago—both comb and extracted—and that that same honey is often reshipped to purchasers in other parts of the country.

Goodness knows Chicago is not very Heavenly in many things, but we know there are lots of good people here, and pure honey, too. Mr. Harmelling will only harm himself by writing in the style indicated by the above quoted paragraph.

Organization for properly conducted self-defense seems to be necessary everywhere. The latest thing of the kind occurred among the daily papers of Chicago. At a time when every one was eager for war news, and immense numbers of papers were sold, the Stereotypers' Union made a peremptory demand for a very material increase of pay under threat that no papers could be issued unless their demands were granted. The dailies saw they were in a tight place, but concluded to meet organization with organization, deeming the demands entirely unwarranted, and entered into an organization agreeing to stand by each other. The great reading public were greatly surprised to receive no papers for a few days, then a small-sized paper rapidly increasing to its normal size, and the supposition is that the Stereotypers' Union has been left out in the cold.

If bee-keepers would have their rights defended, they, too, must organize.

Convention at Omaha, Sept. 13-15.—Finally the date of holding the next annual meeting of the United States Bee-Keepers' Union has been fixed for Sept. 13, 14 and 15. The place—Omaha—was decided upon several weeks ago. Here is a notice from Secretary Mason:

STA. B, TOLEDO, OHIO, July 23, 1898.

EDITOR AMERICAN BEE JOURNAL:—I have just received from Mr. Whitcomb the following letter in regard to rates, etc., for the convention of the United States Bee-Keepers' Union, which will explain itself:

OMAHA, NEBR., July 18, 1898.

MR. E. WHITCOMB—Dear Sir: Confirming our talk this afternoon, I wish to advise that the Western Passenger Association has put in a rate for the Annual National Encampment Sons of Veterans United States of America, Sept. 12 to 16, as follows:

One lowest first-class normal tariff fare for the round-trip, plus \$2.00, from Western Passenger Association territory, east of and including Utah, except that from points within a radius of 150 miles of Omaha rate of one fare for the round-trip will apply.

The following rates apply from the extreme terminals on the east: Chicago, \$14.75, Peoria, \$13.25, and St. Louis, \$13.50. Tickets on sale Sept. 10 and 11, and from points west of Colorado and Wyoming State lines, Sept. 9. From points within a radius of 150 miles of Omaha, Sept. 12. Tickets good to return Sept. 21.

We will endeavor to have these rates extended to cover all the United States, and would suggest that it would be a very good rate for the bee-keepers' meeting.

Yours truly, W. N. BABCOCK,
 Manager Department of Transportation.

It will be seen that the above rates are lower than those given in my previous notice of rates. Mr. Whitcomb writes: "The above rate is the best in sight. . . . Hotel rates and place of meeting will be arranged a little later on, but it is thought that the members can be quartered in private families at \$1.00 per day, and that hotel rates can be secured at about \$2.00 per day."

This allows the Executive Committee to fix on Sept. 13,

14 and 15 as the time for holding the convention, commencing on the 13th at 10 o'clock in the forenoon, and closing the evening of the 15th.

The program for the convention is not yet quite completed, and will not be in time to be put in the monthly bee-papers before September, but will be in the American Bee Journal and Gleanings by Aug. 15. The program will be similar to the one prepared for the Buffalo convention last year, containing bee-keepers' music, and the first page of the cover will be occupied by an illustration containing the photographs of the Board of Directors and Executive Committee, with an appropriate background. Any one desiring one or more copies of the program can obtain the same by sending five cents in stamps to the Secretary, for each copy wanted.

If the place of meeting, hotel rates, etc., are not given in the bee-papers in time, those attending the convention will find a printed notice posted in each railroad depot in Omaha, on the days of the meeting.

Any one not a member of the United States Bee-Keepers' Union may become such by sending a dollar to the Secretary, or General Manager Secor, or the editor of any of the bee-papers. Don't send a dollar bill unless in a registered letter; and if you remit to me by post-office money order, have it drawn on Sta. B, Toledo, Ohio.

A. B. MASON, Secretary.

Now that the date of the convention is settled, everybody can begin to make plans for being present.

Remember the date—Sept. 13 to 15. And the place—Omaha, Nebr.

LATER.—Since the foregoing was put in type we have received the following letter that Mr. Whitcomb sent to Dr. Mason:

OMAHA, NEBR., July 22, 1898.

FRIEND MASON:—The Delone Hotel, corner of 14th street and Capitol avenue, is where the convention will be held, and which will also be the headquarters of the Union. Rates for rooms, on the European plan, \$1.00 a day; board \$1.00 a day. No one will be asked to double up, but each person will be given a bed, and be taken care of at this rate as long as there is a room in the house, even if it takes rooms that cost \$4.00 a day.

In order to reach the hotel from the Union Depot, take the Dodge street car and transfer at 14th street for the Sherman avenue line; 5 cents pays the entire bill for carfare.

Those who desire to take rooms and secure meals outside will be at liberty to do so. Rates for meals at restaurants and chop-houses from 10 to 50 cents.

The limit of tickets will give 10 days in which to see the Exposition and attend the meeting.

E. WHITCOMB.

Getting New Subscribers.—Many of our regular subscribers have done good work in getting new subscribers for the American Bee Journal. We appreciate their efforts, and thank them besides sending them the premiums we have offered and they have earned.

But we want 1,000 more new subscribers by October 1—during August and September. That ought not to be a hard job when you consider the premiums we offer regular subscribers, on page 490, for the work of getting the new ones.

We are beginning all new subscriptions with July 1, as we have plenty of back numbers since that date, and as we want all the new readers to have a complete set of Mr. White's nine articles on "Profitable Bee-Keeping."

Perhaps some of our present subscribers would prefer to pay their own subscriptions instead of taking premiums for sending new subscribers. Well, we can accommodate them all right. Send us three new subscribers for a year, at \$1.00 each, or seven new subscribers for the last six months of 1898, at 40 cents each, and we will credit your subscription for one year; or send us four new six-months' subscriptions at 40 cents each, and we will credit your own subscription for six months.

Now it seems that with all the offers we are making in various places in this number of the Bee Journal, the 1,000 new subscribers ought to come very easily in the next two months.

See "Bee-Keeper's Guide" offer on page 477.



EDITOR HUTCHINSON, of the Bee-Keepers' Review, in Genesee Co., Mich., reports the best honey-flow in years in his locality.

MR. J. W. KUHN, of Republic Co., Kan., has sent us a copy of his very neat catalog for 1898, offering improved golden Italian queens and bees for sale.

THIS INTERESTING (?) EDITORIAL paragraph we find in one of our apian exchanges:

"We are now out of Mason's fruit-jars, and as the price is nearly double what it was formerly, we will not purchase any more until they are lower."

MR. S. A. NIVER, of Tompkins Co., N. Y., writing us July 2, said:

"Clover was fine in looks, but yielded no honey. Basswood bloomed in great shape, but gives up but little surplus. Five pounds surplus per colony would be about my estimate. Buckwheat is our old stand-by."

MR. A. I. ROOT, of Gleanings in Bee-Culture, called on us last Friday, when on his way to Yellowstone Park, and other places in the great Northwest. Mr. Root seemed well and cheerful, and spent the day riding all over Chicago on our bicycle. We were glad we could furnish the "horse" for him to ride and put in a pleasant day. He rides like a boy and appears to enjoy life hugely.

MR. J. T. CALVERT, of the A. I. Root Co., spent about a half day with us July 22. He had been making a several-days' tour among some of the supply dealers in Michigan and Wisconsin, and found that they, like his own firm, had past through a very busy season. Mr. Calvert was looking well, and seemed to be ready for another grand rush in the bee-supply business. They are contemplating the making of extensive improvements and additions to their present capacity for turning out implements for bee-keepers.

MR. E. M. STORER, who has 200 colonies in the vicinity of the great Okefinokee swamp of Southern Georgia, writes that while he has considerable stock of extracted honey of this year's crop on hand in 60-pound cans and 500-pound barrels, destructive forest fires are responsible for a much shorter crop than would otherwise have been obtained. Our Southern friends seem to be "catching it" all around from fires this year. Our own apiary in South Florida has been no exception.—Editorial in American Bee-Keeper.

YE EDITOR spent two most enjoyable days at the home of Dr. C. C. Miller last week—Wednesday and Thursday. It was 90° above zero while there, but pleasant nevertheless, for that home is in a cool place—"set on a hill, and can't be hid"—and is very restful and refreshing. At least we found it so. Next week we hope to tell more about our visit to the "Medicine Man of the Marengoes." We returned just about an hour ago (Thursday evening, July 28), and will not have room in this week's number of the American Bee Journal to speak further of our trip.

THE A. I. Root Co. give a few statistics in Gleanings for July 15, as follows:

"In the year beginning July 1, 1897, and ending June 30, 1898, we have made about 16 million sections of all kinds and sizes, besides buying about four million from other manufacturers, and turning away orders for many more. Our output of Weed process foundation in the same time was 55 tons, while Chas. Dadant & Son made 33 tons, or 88 tons in all, or 176,000 pounds of Weed process foundation sold in the United States within the 12 months. Several tons of what we made was exported. Since we have been making fences we have turned out half a million of the various styles."

We will be glad to give statistics from our other advertisers if they will forward them to us for publication.

FOR THE READERS OF THE
AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING, —WITH— HINTS TO BEGINNERS.....

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles :

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|------------------------------|----------------|---------------|
| 1. General and Introductory. | 4. Swarming. | 7. Supering. |
| 2. Bees. | 5. Hives. | 8. Diseases. |
| 3. Handling Bees. | 6. Foundation. | 9. Wintering. |

This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

**The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it**

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For Sending ONE New 40-cent Subscriber:

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|---|---|
| 1 Wood Binder for a Year's Bee Journals | 10 Foul Brood—by Dr. Howard |
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| 3 Handbook of Health—Dr. Foote | 12 Foul Brood Treatment—by Prof. Cheshire |
| 4 Poultry for Market—Fan. Field | 13 Foul Brood—by A. R. Kohnke |
| 5 Turkeys for Market—Fan. Field | 14 Muth's Practical Hints to Beekeepers |
| 6 Our Poultry Doctor—Fan. Field | 15 15 "Honey as Food" Pamphlets |
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For Sending TWO New 40-cent Subscribers:

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|---|---|
| 1 Potato Culture—by T. B. Terry | 7 Hutchinson's "Advanced Bee-Culture" |
| 2 Green's Four Books | 8 Dr. Brown's "Bee-Keeping for Beginners" |
| 3 Ropp's Commercial Calculator | 9 Bienen-Kultur—German |
| 4 Dr. Tinker's Bee-Keeping for Profit | 10 Bees and Honey—160 pages—by Newman |
| 5 40 "Honey as Food" Pamphlets | 11 People's Atlas of the World |
| 6 Winter Problem in Bee-Keeping—by Pierce | |

All New Subscriptions Begin July 1.

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

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In the multitude of counsellors there is
safety.—Prov. 11-14.

Bees Hived on All Drone-Combs

Query 79.—1. Suppose a prime swarm is hived on all fully-built frames of drone-comb, what kind of bees will they rear, drones or workers?

2. If worker-bees were the result, would this not be a good plan to follow to secure larger bees, and consequently longer tongues?—Illinois.

O. O. Poppleton—I don't know.

W. G. Larrabee—1. I should say they would rear drones.

E. France—1. I never tried it. 2. You try it and report.

R. L. Taylor—1. Both. 2. No, you can't fool Nature that way.

P. H. Elwood—I haven't observed any worker-bees reared in drone-comb.

R. C. Aikin—1. Drones, drones, drones. 2. I don't think it will work one bit.

Dr. A. B. Mason—1. Both drones and workers, but more workers than drones. 2. I think not.

Mrs. L. Harrison—1. Workers. When the levee broke in the South, and the water drove the bees into the surplus

Southern Home of the Honey-Bee

Will continue to rear none but the **BEST QUEENS**. Untested, 50 cents; Tested, \$1.00.

GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
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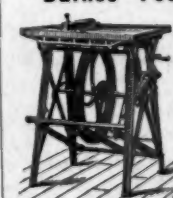
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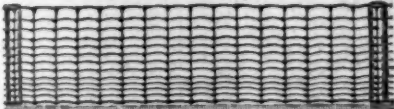
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When the soldiers reached Chickamauga, there was a fence—first in the field. Landed in Cuba—there's the Page. It's a "path-finder."

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arrangement, bees reared workers in drone-comb. 2. The workers would not be any larger.

G. M. Doolittle—1. Both. 2. Worker-bees from drone-comb are no larger than other workers, according to my observation.

J. M. Hambaugh—1. Oh, goodness; try and see. I don't know. 2. This would be a broad stride. Let us hear the result.

Emerson T. Abbott—1. Workers, if they wish; if not, drones. 2. It is not always the largest egg that produces the biggest chicken.

C. H. Dibbern—1. I think they would be mostly drones. 2. Yes, but would the workers produced in drone-cells, if any, be really larger?

Dr. C. C. Miller—1. The only time I ever tried it they didn't do either. They left. 2. Perhaps, but if I wanted to try anything of the kind I'd go at it gradually.

D. W. Helse—1. If the swarm will remain I would expect them to rear drones until they had time to reconstruct the cells into worker, which I think they would do.

Jas. A. Stone—1 and 2. I think they would change the cells to worker-cells as far as necessary, so the result would be a loss of that much time in making the change.

Dr. J. P. H. Brown—Both these questions are premised upon a violation of the bee-"constitution." Before they could be carried out the constitution would have to be "amended."

J. E. Pond—1. Drones and workers both, in my opinion. 2. No; for many tests have been made in this direction, without making any perceptible increase in the size of the workers.

E. S. Lovesy—1. Both. With us as a rule the majority will be workers. 2. I doubt it. I have never perceived any difference. But I have never made any experiments along this line.

Prof. A. J. Cook—1. I don't know. Who would hive them thus except for experiment? Try it, and you will know. 2. I doubt if it would work that way. May-be they would leave in disgust.

Mrs. J. M. Null—1 and 2. I don't know. Personally speaking the boundary lines of practical, everyday bee-keeping are sufficiently extensive. "Might-be's" soar to inaccessible heights.

S. T. Pettit—1. Usually they will rear a fair proportion of both. 2. I could never see any difference in bees so reared from those bred in worker-combs. It might possibly add a little to the length of their tongues, but I doubt it.

Eugene Secor—1. They might try to reconstruct the cells so that workers could be reared, but I would not be surprised if they deserted the hive in disgust. 2. Do you think that the size of the cradle determines the size of the grown-up baby?

Chas. Dadant & Son—They will rear drones till they have managed to narrow down some of the cells. This experiment was tried by Drory, of Bordeaux, France, some 15 years ago, and the result was only a few eggs were laid that hatch as workers.

Rev. M. Mahin—1. I have never seen it tried, and do not know. It has been said that under some conditions queens will lay worker-eggs in drone-cells, but

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I do not know that they will. 2. The size of the cell has very little influence, if any, on the size of the bee.

G. W. Demaree—1. Would they stay in a hive filled exclusively with drone-comb? Have you tried the experiment? I have not. If they could be induced to stay on drone-combs, no doubt but they would cut away at least a part of the drone-comb and build worker-comb in its place. 2. I have little faith in rearing big bees by any other process than that of selection in breeding.

J. A. Green—1. While I have never tried such a thing, I should suppose that both workers and drones would be reared, tho a larger percentage of drones than usual. 2. How could it have any effect on the succeeding generation? The queens would not be reared in larger cells than usual, neither would the drones. What have the workers to do with the succeeding generation further than to feed it and care for it, and what difference would their size make in these respects?

GENERAL ITEMS

Grand Honey Season.

We have had a grand honey season in this locality this year—the best I ever knew. I like the old American Bee Journal. WM. AIKEN.
Ontario, Canada, July 23.

Wortman's Handy Tool.

The illustration of Wortman's handy tool for bee-keepers on page 451, makes it show the hammer on the edge. It is intended to be underneath to make it handy, as in raising brood-frames the hammer rests against a frame, answering for a fulcrum or stop. Otherwise the illustration is very good.

A. WORTMAN.

Bought Foul Brood.

I must tell what kind of a job a bee-keeper here has gotten into, only ½ mile from my apiary, by not taking a bee-paper and keeping informed. He had about 40 colonies of bees, then bought 60 colonies the past spring that had foul brood in the worst form. I tried to get him to subscribe for the American Bee Journal, but he said he could get along just as well without a journal. My bees show no signs of the disease as yet. E. E. SMITH.
Lenawee Co., Mich., July 22.

Some Blunders—Bees Doing Nicely.

As usual, I have made a great many blunders this season, the greatest of which was to have large swarms on starters. Heretofore I had used full sheets of wired foundation, and this season I wired my frames and put in a starter and hived large swarms. The result was drone-comb mixt in nearly all my frames. It is all right for young queens with a few bees, but it won't do in this locality.

I am becoming more convinced every season that large hives are the thing. I use from one to four 8-frame hive-bodies to each colony. I supersede all worth-

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If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with

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Last year only about one per cent—only one subscriber in 100—ordered his Review discontinued. If the Review could secure 1,000 new subscribers the present year, there is an almost absolute certainty that at least 900 of them would remain; not only next year, but for several years—as long as they are interested in bees. Once a really good bee-journal visits a bee-keeper a whole year it usually becomes a permanent member of his family.

I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me \$1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

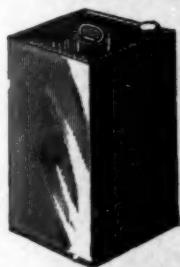
Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For \$1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31D4f

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A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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less queens. I have some that keep 12 to 14 frames of brood through the spring and summer.

I give plenty of ventilation by raising the front of the hive on blocks, if needed. I never suffer the bees to hang out.

My bees are doing nicely this season. I have increased from 34 to 82, and have taken off some nice comb honey, and a lot on the hives now. We have a nice prospect for a fall flow.

J. T. HAIRSTON.

Cherokee Nation, Ind. T., July 20.

Comb Honey Breaking Down.

There has been some complaint of honey breaking down in the sections in shipment. I think it may be of some use to try the following plan:

In folding the sections, place them so that the part where they are match together will be on top, and in that end or side put the long sheet of foundation, and put the bottom starter in the other end. Now, when the bees fill the box with honey, reverse it, and have the match side or end down, so that the great weight of the honey will rest on the bottom of the box. The top of the box as it then stands will be smooth for any marking which one may wish to make on the box, and there will be very little breakdown. WM. H. EAGERTY.

Republic Co., Kan., July 18.

Another Hive Tool.

Take an old horse-rasp, and draw it out wedge-shape 3 inches long by 1½ inches wide. Make the handle ¾ inches wide by ¾ inch thick, and bend it to an angle of 15 degrees. This will be found to be a very handy tool for prying supers loose, and also for loosening frames. The angle of 15 degrees makes the handiest part of the tool. It may also be used for a chisel, and will stand all the pry you wish to give it.

Kendall Co., Ill.

H. C. GORTON.

Crop Will be Light.

I had 14 colonies of bees in the spring, and have increased to 26. I lost one on a Sunday while at church; but one came to me from one of our neighbors. I would have more colonies but I doubled up some of the late swarms. The bees have been storing some surplus honey, but not a great deal. The crop will be light.

J. RIDLEY.

Winneshiek Co., Iowa, July 23.

Putty-Knife as a Hive Tool.

I frequently see in the Bee Journal something said about tools. I have been a bee-keeper for 10 years, and I have never found anything so handy as a common square-point putty knife. I don't think anything would take its place for cleaning supers, sections, scraping bottoms of hives, and hundreds of other things. If my bee-keeping friends have never used one, they should by all means get one and try it.

Mason Co., Ky.

C. N. BOLINGER.

Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association, will be held at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

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Being the cleanest is usually worked the quickest of any Foundation made

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LARGE Yellow Untested Italian Queens, 65 cents Each.
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Please mention the Bee Journal. 28A4t

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Five cross-bars are riveted in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces.

It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one who flies bother, mosquitoes bite, or bees sting.

For sending us only TWO NEW subscribers to the Bee Journal for one year (at \$1.00 each) we will mail to a regular subscriber one of these Globe Bee-Veils; or, for \$1.75 we will send the Bee Journal one year and the Veil to any address.

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BEE-BOOKS

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Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, \$1.00.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 530 pages; bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated. Price, postpaid, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. L. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 850 pages; bound in paper covers. Price, \$1.00.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called **BEES OF HONEY**. 10. page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers.—Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers—by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 30 cts.; 500 for \$1.25; 1000, \$2.00.

How to Keep Honey and preserve its richness and flavor. Price same as Why Eat Honey.

Alsike Clover Leaflet.—Full directions for growing. 50 for 25 cts.; 100 for 40 cts.; 200, 70c.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from **BEES AND HONEY**. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plant. It is a chapter from **BEES AND HONEY**. Price, 10 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEwen Treatment and reviews the experiments of others. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

History of Bee-Associations, and Brief Report of the first 20 conventions. Price, 10 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price 10 cts.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yield of comb or extracted honey." 80 p., illustrated, 25c.

Commercial Calculator, by C. Hopp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2, in fine artificial leather, with pocket, silicate glass, and account-book. Price, 60 cts.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping, in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Green's Four Books, by Chas. A. Green.—Devoted to 1st, How We Made the Old Farm Pay; 2nd, Peach Culture; 3rd, How to Propagate Fruit-Plants, Vines and Trees; 4th, General Fruit Instructor. Nearly 120 pages. Fully illustrated, 25c.

Garden and Orchard, by Chas. A. Green.—Gives full instructions in Thinning and Marketing Fruits; Pruning, Planting and Cultivating; Spraying, Evaporation, Cold Storage, Etc. 94 pages, illustrated. Price, 25 cts.

Kendall's Horse-Book.—35 pictures, showing positions of sick horses, and treats on all their diseases. English or German. Price, 25 cts.

Lumber and Log-Book.—Gives measurements of lumber, logs, planks; wages, etc. 25c.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees, Poultry, Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Book Clubbing Offers.

(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only one book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

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|--|--------|
| 1. Langstroth on the Honey-Bee..... | \$2.00 |
| 2. A B C of Bee-Culture..... | 2.00 |
| 3. Bee-Keeper's Guide..... | 1.75 |
| 4. Bees and Honey (Cloth bound)..... | 1.65 |
| 5. Doolittle's Scientific Queen-Rearing..... | 1.75 |
| 6. Dr. Howard's Foul Brood Book..... | 1.10 |
| 7. Advanced Bee-Culture..... | 1.30 |
| 8. Bienen-Kultur (German)..... | 1.20 |
| 9. Rational Bee-Keeping (Paper bound)..... | 1.75 |
| 10. Bee-Keeping for Profit..... | 1.15 |
| 11. Convention Hand-Book..... | 1.15 |
| 12. Poultry for Market and Profit..... | 1.10 |
| 13. Turkeys for Market and Profit..... | 1.10 |
| 14. Capons and Caponizing..... | 1.10 |
| 15. Our Poultry Doctor..... | 1.15 |
| 16. Green's Four Books..... | 1.15 |
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| 18. Rural Life..... | 1.25 |
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| 22. Potato Culture..... | 1.10 |
| 23. Hand-Book of Health..... | 1.30 |
| 24. Maple Sugar and the Sugar Bush..... | 1.10 |
| 25. Silo and Silage..... | 1.30 |
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PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company, 1730 South 13th St., Omaha, Neb.**

Select-Tested Golden Adel Queens.

Each, \$1.00. A practically non-swarming and non-stinging strain of golden bees. "How to Prevent Honey Candying" given to each customer. Tested Queens, each, 75 cents.

HENRY ALLEY, Wenham, Mass.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 20.—Not any of the new crop of comb honey on the market this week; what little has come sold at 11¢ 1/2. Extracted brings 5¢ 7/8 for the white, according to quality; ambers, 5¢ 3/8. Southern fair to good grades, 4¢ 5/8. Beeswax, 27¢. Market is in good shape for disposing of honey of all kinds. **R. A. BURNETT & CO.**

Kansas City, July 9.—New comb, No. 1, white, 11¢ 1/2; amber, 10¢ 1/2. Extracted, white, 5¢ 5/8; amber, 4¢ 4/8. Beeswax, 22 to 25¢.

Old stock of honey all cleaned up. Few shipments of new in market.

C. C. CLEMONS & CO.

New York, July 30.—There is some little new Southern comb honey on the market, mostly irregular quality and selling at from 9 to 11¢. Extracted of all kinds is in good demand. Common grade Southern, 50 to 52¢ per gallon; good, 55 to 57¢; choice, 5 to 5 1/2¢ per pound; some exceptionally fine lots sell at 6¢. Beeswax is very quiet at 26 to 27¢.

HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13¢; A No. 1 white in glass-front cases, 11 to 12¢; No. 1, 10 to 11¢; No. 2, 8 to 9¢. Extracted, white, 6 to 7¢; light amber, 5 to 6¢. Beeswax, pure, in good demand with very light supply, 30¢.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, July 20.—White comb, 8 1/2 to 10¢; amber, 6 1/2 to 7 1/2¢. Extracted, white, 5 1/2 to 6¢; light amber, 4 1/2 to 5 1/2¢. Beeswax, 23 to 25¢.

The ship Roanoke, clearing from this port for New York on the 16th inst., carried 179 cases of extracted honey of 1897 crop. There is some new crop honey on the market, both comb and extracted, but no large quantity of either. New comb of fairly choice quality is offering in 1-pound sections, and in a small jobbing way at 10¢ per pound. Quotable values for extracted show no change.

Detroit, July 21.—Fancy white, 11¢ 1/2; No. 1, white, 10¢ 1/2. Extracted, white, 5¢ 6/8; dark, 4¢ 5/8. Beeswax, 25¢ 2/8.

New honey is arriving, but prices are hardly established.

M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11¢ 1/2; amber, 10¢ 1/2. Extracted fancy white clover, 5 1/2¢; amber, 4 1/2¢. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12¢ 1/2; No. 1, 10¢ 1/2. Extracted, white, 6¢ 7/8. Beeswax, 25¢ 2/8.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff.

WALTER S. POWDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11¢ 1/2; A No. 1, 10¢ 1/2. Extracted, No. 1, 8¢ 1/2; amber, 7¢ 7/8; dark and old, 6¢ 7/8. Extracted, in barrels, kegs or pails, white, 6¢ 1/2; dark and amber, 4¢ 5/8. Beeswax, 26¢ 2/8.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good.

A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11¢; other grades, however, range from 9 to 7¢, and even 6¢ when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6¢, with a moderate demand.

BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11¢; No. 1, 10¢; amber, 9 to 10¢; dark, 8 to 9¢. Extracted, white, 5 1/2 to 6¢; amber, 5 to 5 1/2¢; dark, 4 to 4 1/2¢. Beeswax, 20 to 22¢.

WESTCOTT COM. CO.

Cincinnati, July 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3 1/2 to 6¢, according to quality. Beeswax in good demand at 25 to 28¢ for good to choice yellow.

CHAS. F. MUTH & SON.

Talk about ... Comb Foundation

WE can now furnish the very best that can be made from pure wax. Our New Process of Milling enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

**It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.**

If you once try it you will have no other. Samples furnished **FREE**. Large illustrated Catalog of all kinds of

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And a copy of the American Bee-Keeper, sent upon application. Address,

**THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.**

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**I. J. STRINGHAM,
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1-pound Square Jars, \$4.60 gross.
Labels, 60c gross; disc. on quantities.
Italian Queens, 65c each.
Catalog **FREE**.

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Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and Everything used in the Bee-Industry.

We want the name and address of every Bee-Keeper in America. We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc.

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The A. I. Root Co.'s Goods Wholesale. Retail. ½
Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. **BELL BRANCH, MICH.**
Please mention Bee Journal when writing.

I ARISE



TO SAY to the readers of the
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DOOLITTLE

has concluded to sell
—**BEEES** and **QUEENS**—
in their season, during
1898, at the following
prices:

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| One Colony of Italians on 9 Gallip frames, in light shipping-box | \$5.00 |
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